Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method for realizing QoS guarantee in a MPLS network, comprising:

creating an individual QoS resource list in each edge router to record a resource state corresponding to a path;

each edge router assigning resources to a user terminal which makes a request based on said QoS resource list and updating the QoS resource list; and

wherein the resource states of the paths from [[the]] an edge router to all [[the]] other edge routers in the same domain are recorded in said QoS resource list.

2. (Cancelled)

3. (Currently amended) The method according to claim 1, characterized in that the step of creating [[a]] the QoS resource list further comprises:

pre-configuring LSPs based on service class to set different LSPs for different service classes;

said edge router obtaining resource information of the path from the edge router to each of the other edge routers in the same domain based on LSP resource state information and route information of said MPLS network, and saving the resource information in the QoS resource list.

4. (Previously presented) The method according to claim 1, characterized in that the step of assigning resources to a user terminal which makes a request further comprises:

said edge router receiving a resource request from the user terminal;

said edge router searching said QoS resource list for available information of the requested resources based on an egress edge router in said resource request;

said edge router determining whether the resource request is accessed or rejected based on the available information of said requested resources;

when the resource request is determined to be accessed, modifying the available information of the requested resources in said QoS resource list and sending an acknowledgement message to said user terminal.

5. (Previously presented) The method according to claim 1, characterized in that said QoS resource list at least comprises information of an egress edge router, service class, LSP resources and available resources.

6. (Currently amended) A method for establishing a QoS data path in a MPLS network, comprising:

a user terminal sending a QoS resource request to an ingress edge router;

said edge router determining information of a path to an egress edge router of the QoS resource request;

said ingress edge router determining whether the resource request is accessed or rejected based on comparing available resources of the requested resources corresponding to the path recorded in a QoS resource list with bandwidth resources requested in said resource request; and

when the resource request is determined to be accessed, updating said QoS resource list; and wherein ~~an individual~~ said QoS resource list is created in each edge router, and the resource states of the paths from the edge router to all [[the]] other edge routers in the same domain are recorded in said QoS resource list.

7. (Cancelled)

8. (Currently amended) The method according to claim 6, characterized in that the step of determining further comprises:

comparing available resources of the requested resources in said QoS resource list with said bandwidth resources requested in said resource request;

if said available resources are less than said bandwidth resources, sending a message of rejecting access to said user terminal, otherwise allowing said user terminal to access.

9. (Previously presented) The method according to claim 8, characterized in that the step of allowing the user terminal to access further comprises:

when the resource request is not cross-domain, said edge router sending the resource request to a destination user terminal in said resource request and waiting for an acknowledgement message from the destination user terminal;

when the resource request is cross-domain, said edge router searching for a domain which is close to the destination user terminal in said resource request and has available resources larger than said bandwidth resources, sending the resource request to an edge router of the domain and waiting for an acknowledgement message from the edge router of the domain;

after receiving the acknowledgement message, said edge router sending the acknowledgement message to said user terminal; and

after receiving the acknowledgement message, said user terminal starts the data transmission.

10. (Previously presented) The method according to claim 6, characterized in that the step of updating the QoS resource list further comprises:

subtracting the bandwidth resources requested in said QoS resource request from the available resources of the corresponding requested resources in said QoS resource list.

11. (Previously presented) The method according to claim 6, characterized in that said QoS resource list at least comprises information of the egress edge router, service class, LSP resources and available resources.

12. (Currently amended) A method for terminating QoS data transmission in a MPLS network, comprising:

an ingress edge router receiving a resource releasing request from a user terminal;

said ingress edge router releasing the resources occupied by said user terminal; and

said ingress edge router modifying its QoS resource list which records a resource state corresponding to a path; and

wherein ~~an individual~~ said QoS resource list is created in each edge router, and the resource states of the paths from the edge router to all [[the]] other edge routers in the same domain are recorded in said QoS resource list.

13. (Cancelled)

14. (Previously presented) The method according to claim 12, characterized in that the step of modifying the QoS resource list further comprises:

adding a corresponding amount to available QoS resources corresponding to an egress edge router of said QoS data transmission in the QoS resource list.

15. (Previously presented) The method according to claim 12, characterized in that said QoS resource list at least comprises information of an egress edge router, service class, LSP resources and available resources.

16. (Currently amended) An edge router for a MPLS network, comprising:

a QoS resource list for recording a number of resource states corresponding to a number of paths; and

an access and resource control unit for accessing or rejecting a resource request from a user terminal based on information recorded in the QoS resource list and updating said QoS resource list; and

wherein ~~an individual~~ said QoS resource list is created in each edge router, and the resource states of the paths from the edge router to all [[the]] other edge routers in the same domain are recorded in said QoS resource list.

17. (Cancelled)

18. (Previously presented) The edge router according to claim 16, further comprising a route list and a MPLS list based on which said QoS resource list is created and corresponds to LSP resource state of the MPLS network.

19. (Previously presented) The edge router according to claim 16, further comprising a data transmission unit which, under the control of said access and resource control unit, performs operations such as classifying, marking, and queuing and scheduling on data transmitted by the user terminal.

20. (Previously presented) The edge router according to claim 16, characterized in that said QoS resource list at least comprises information of an egress edge router, service class, LSP resources and available resources.

21. (Previously presented) A MPLS network for realizing QoS guarantee, comprising:

an edge router according to any one of claims 16 to 20.